

IN THE CLAIMS:

1. (Previously Presented): A method in a data processing system for performing a raster operation of graphics data, wherein the data processing system includes a system memory and a video memory, wherein the system memory and the video memory are connected by a bus and wherein the graphics data is organized into picture elements, the method comprising the data processing system implemented steps of:

selecting a first plurality of picture elements from the system memory;
selecting a second plurality of picture elements from the video memory,
wherein the first plurality of picture elements and the second plurality of picture elements are selected such that changes in a direction of data on the bus are minimized when performing raster operations on the first plurality of picture elements and the second plurality of picture elements;
reading the first plurality of picture elements from the system memory;
reading the second plurality of picture elements from the video memory;
performing a raster operation on a picture element from the first plurality of picture elements and a picture element from the second plurality of picture elements to form a processed picture element;
writing the processed picture element to the video memory; and
repeating the performing and writing steps for each picture element in the first plurality of picture elements and the second plurality of picture elements until all picture elements have been processed, wherein changes in the direction of data on the bus are minimized between the reading and writing of picture elements.

2. (Original): The method of claim 1, wherein the plurality of processed picture elements form a scan line.

3. (Original): The method of claim 1, wherein the raster operation performs a logic OR function using a picture element from the system memory and a picture element from the video memory.

4. (Original): The method of claim 1, wherein the first plurality of picture elements are part of a source bitmap.

5. (Original): The method of claim 1, wherein the second plurality of picture elements are part of a destination bitmap.

6. (Original): The method of claim 1, wherein the reading steps, the performing step, and the writing step are performed in a graphics engine.

7-11. (Canceled)

12. (Previously Presented): A data processing system comprising:

a bus;

a system memory connected the bus, wherein a first plurality of graphics elements are located within the system memory;

a video memory connected to the bus, wherein a second plurality of graphics elements are located within the video memory;

a processor unit connected to the bus, wherein the processor unit executes instructions to select a first plurality of picture elements from the system memory; select a second plurality of picture elements from the video memory in which the first plurality of picture elements and the second plurality of picture elements are selected such that changes in a direction of data on the bus are minimized when performing raster operations on the first plurality of picture elements and the second plurality of picture elements; read the first plurality of picture elements from the system memory; read the second plurality of picture elements from the video memory; perform a raster operation on a picture element from the first plurality of picture elements and a picture element from the second plurality of picture elements to form a processed picture element; write the processed picture element to the video memory; and repeat performing and writing for each picture element in the first plurality of picture elements and the second plurality of picture elements until all picture elements have been processed, in which changes

in the direction of data on the bus are minimized between the reading and writing of picture elements.

13. (Original): The data processing system of claim 12, wherein the first plurality of graphics elements is a plurality of picture elements.

14. (Original): The data processing system of claim 12, wherein the first plurality of graphics elements form a scan line.

15. (Original): The data processing system of claim 12, wherein the scan line is a scan line in a bitmap.

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16. (Original): The data processing system of claim 13, wherein the first plurality of picture elements form a bitmap.

17. (Original): The data processing system of claim 12, wherein a graphics engine performs the raster operation.

18. (Original): The data processing system of claim 12, wherein a video driver performs the raster operation.

19. (Previously Presented): A data processing system for performing a raster operation of graphics data, wherein the data processing system includes a system memory and a video memory, wherein the system memory and the video memory are connected by a bus and wherein the graphics data is organized into picture elements, the data processing system comprising:

first selecting means for selecting a first plurality of picture elements from the system memory;

second selecting means for selecting a second plurality of picture elements from the video memory, wherein the first plurality of picture elements and the second plurality of picture elements are selected such that changes in a direction of data on the bus are

minimized when performing raster operations on the first plurality of picture elements and the second plurality of picture elements;

reading means for reading the first plurality of picture elements from the system memory;

reading means for reading the second plurality of picture elements from the video memory;

performing means for performing a raster operation on a picture element in the first plurality of picture elements and a picture element in the second plurality of picture elements to form a processed picture element;

writing means for writing the plurality of processed picture elements to the video memory; and

repeating initiate of the performing means and writing means for each picture element in the first plurality of picture elements and the second plurality of picture element until all picture elements have been processed, wherein changes in the direction of data on the bus are minimized between the reading and writing of picture elements.

20. (Original): The data processing system of claim 19, wherein the plurality of processed picture elements form a scan line.

21. (Original): The data processing system of claim 19, wherein the raster operation performs a logic OR function using a picture element from the system memory and a picture element from the video memory.

22. (Original): The data processing system of claim 19, wherein the first plurality of picture elements are part of a source bitmap.

23. (Original): The data processing system of claim 19, wherein the second plurality of picture elements are part of a destination bitmap.

24. (Original): The data processing system of claim 19, wherein the first reading means, the second reading means, the performing means, and the writing means are located in a graphics engine in the data processing system.

25-29. (Canceled)

30. (Previously Presented): A computer program product in a computer readable medium for performing a raster operation of graphics data, wherein the data processing system includes a system memory and a video memory, wherein the system memory and the video memory are connected by a bus and wherein the graphics data is organized into picture elements, the computer program product comprising:

first instructions for selecting a first plurality of picture elements from the system memory;

second instructions for selecting a second plurality of picture elements from the video memory, wherein the first plurality of picture elements and the second plurality of picture elements are selected such that changes in a direction of data on the bus are minimized when performing raster operations on the first plurality of picture elements and the second plurality of picture elements;

third instructions for reading the first of a first plurality of picture elements from the system memory;

fourth instructions for reading the second plurality of picture elements from the video memory;

fifth instructions for performing a raster operation on a picture element in the first plurality of picture elements and a picture element in the second plurality of picture elements to form a processed picture element;

sixth instructions for writing the processed picture element to the video memory;
and

seventh instructions for initiating the fifth instructions and sixth instructions for each picture element in the first plurality of picture elements and the second plurality of picture elements until all picture elements have been processed, wherein changes in the

direction of data on the bus are minimized between the reading and writing of picture elements.

31. (Canceled)

32. (Canceled)
